Approved by
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GEORGIA INSTITUTE OF TECHNOLOGY
Engineering Experiment Station

PROJECT INITIATION

Date: February 25, 1974

ect Title: "Technical Assistance for Fusion-Bonded Carpet Machine"

ect No.: A-1608

ect Director: Mr. J. M. Akridge

nsor: Textile Rubber & Chemical Company, Inc., Dalton, Georgia

ctive February 15, 1974 Estimated to run until June 30, 1974

e Agreement: Standard Industrial Agreement Amount: $ 4,490.00
dated February 7, 1974.

orts Required: Monthly Letter Reports; Final Summary Letter.

nsor Contact Person (s):

Dr. Alfred C. Daniel
General Manager
Textile Rubber & Chemical Co., Inc.
P.O. Box 2168
Dalton, Georgia 30720

Phone: (404) 278-1300

gned to SENSOR SYSTEMS Division

IES TO:

Project Director
Director
Assistant Director
GTRI
Division Chief (s)
Branch Heads
Service Groups
Patent Coordinator

☐ Photographic Laboratory
☑ Security, Property, Reports Coordinator
☐ EES Accounting
☐ EES Supply Services
☐ Library
☐ Office of Computing Services
☐ Project File
☐ Other _____

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GEORGIA INSTITUTE OF TECHNOLOGY
ENGINEERING EXPERIMENT STATION

PROJECT TERMINATION

Date: February 12, 1976

Project Title: Technical Assistance for Fusion-Bonded Carpet Machine

Project No: A-1608

Project Director: Mr. J. M. Akridge

Sponsor: Textile Rubber & Chemical Co., Inc., Dalton, GA

Effective Termination Date: Immediately

Clearance of Accounting Charges: N/A - no recent activity

Grant/Contract Closeout Actions Remaining: None

Assigned to: Systems and Techniques Laboratory

COPIES TO:
Project Director
Director, EES
Assistant Director
Division Chief
EES Accounting
Patent Coordinator

✓ Research Services/Photo Lab
EES Supply Services
General Office Services
Library, Technical Reports Section
Office of Computing Services
Project File
Other Sue Corbin

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A-1608

ENGINEERING EXPERIMENT STATION
GEORGIA INSTITUTE OF TECHNOLOGY • ATLANTA, GEORGIA 30332

15 March 1974

Textile Rubber and Chemical Company, Inc.
Route #1
Dalton, Georgia 30720

Attention: Dr. Alfred G. Daniel
General Manager

Subject: Progress Report No. 1 on "Technical Assistance for Fusion-Bonded Carpet Machine" (EES/GIT Project A-1608)

Dear Sir:

Initial work has concentrated on designing an oven and control system which will duplicate the performance of the Cohutta machine and will also have the flexibility to thoroughly cover potential operating conditions. Machine No. 1 will be instrumented with up to 20 platinum RTD's which can be selectively read on a Rosemont digital temperature indicator. The first three machines will also have a Rosemont temperature controller with analog temperature indication. The temperature controller is also equipped with an alarm option which indicates when the controller is incapable of maintaining the desired temperature, as might occur if one of the triac power packs should fail. Vectrol triac power packs are being used rather than Rosemont because of better performance with the heat lamps.

Machines 1-3 have been designed to have the following operating modes:

1. Manual
   a) Each of the nine rows (2 sides per row) can be individually adjusted from 0-100% power.
   b) One side can be turned off with all nine rows on the remaining side individually adjusted from 0-100% power.
2. Automatic
   a) Controller will maintain desired temperature at detection point through a temperature profiling unit which will permit establishing an oven temperature profile while still under control of the controller.

3. The machine can be started and stopped from the control panel or any of four remote stations.

4. The oven (each half or both), the selvege motor and the drive motor can be selectively, stopped or started from the control panel.

The heat lamp type being used in the first three machines has been placed on an optical bench and scanned to determine the lamp relative intensity as a function of its lateral distance from the lamp centerline. Lamp-to-detector spacing was identical to the lamp-to-carpet spacing used in the oven. The data from these tests will be used to design an oven using the T-3 type tungsten filament rod type heaters. It is not expected that the new oven design will be used before machine No. 4.

Effort on this program during the first month has been considerably higher than the estimated average monthly effort due to tight time frame. Effort is expected to taper off after the initial effort.

Very truly yours,

J. M. Akridge
Project Director

dab

File A-1608

ENGINEERING EXPERIMENT STATION
GEORGIA INSTITUTE OF TECHNOLOGY • ATLANTA, GEORGIA 30332

April 22, 1974

Textile Rubber and Chemical Company, Inc.
Route #1
Dalton, Georgia 30720

Attention: Dr. Alfred G. Daniel
General Manager

Subject: Progress Report No. 2 on "Technical Assistance for Fusion-Bonded Carpet Machine" (EES/GIT Project A-1608)

Dear Sir:

Several discussions have been held with Jim Monti of your staff regarding our assistance on this program. He advised me that they were in the assembly stages of the program at the present time and saw no need for my assistance during this reporting period. He said that they expected to require my participation during the checkout and first tests of machine number one. He will call when this assistance is required but expects it to occur in late April or early May.

Once the first machine has been checked out and sample runs made, determinations will be made regarding changes, modification, or possible more advanced systems. Monti has not encountered any problems requiring my assistance during this period. I am available on relatively short notice and Monti is aware of this.

Very truly yours,

James M. Akridge
Senior Research Engineer

JMA:lb

File: A-1608

ENGINEERING EXPERIMENT STATION

GEORGIA INSTITUTE OF TECHNOLOGY • ATLANTA, GEORGIA 30332

10 July 1974

Textile Rubber and Chemical Company, Inc.
Route #1
Dalton, GA 30730

Attention: Dr. Alfred G. Daniel
General Manager

Subject: Progress Report No. 3 on "Technical Assistance for Fusion-Bonded Carpet Machine" (EES/GIT Project No. A-1608)

Dear Sir:

Jim Monti has stated that he does not need our assistance at the present time. Mr. Monti will call when assistance is needed. No work was done during this time period because none was requested. We are available when needed.

Very truly yours,

James M. Akridge
Senior Research Engineer

JMA/mac

A-1608

ENGINEERING EXPERIMENT STATION

GEORGIA INSTITUTE OF TECHNOLOGY • ATLANTA, GEORGIA 30332

12 July 1974

Textile Rubber and Chemical Company, Inc.
Route #1
Dalton, GA 30730

Attention: Dr. Alfred G. Daniel
General Manager

Subject: Progress Report No. 4 on "Technical Assistance for Fusion-Bonded Carpet Machine" (EES/GIT Project No. A-1608)

Dear Sir:

Jim Monti has stated that he does not need our assistance at the present time. Mr. Monti will call when assistance is needed. No work was done during this time period because none was requested. We are available when needed.

Very truly yours,

James M. Akridge
Senior Research Engineer

JMA/mac

File: A-1608

ENGINEERING EXPERIMENT STATION

GEORGIA INSTITUTE OF TECHNOLOGY • ATLANTA, GEORGIA 30332

15 July 1974

Textile Rubber and Chemical Company, Inc.
Route #1
Dalton, GA 30730

Attention: Dr. Alfred G. Daniel
General Manager

Subject: Progress Report No. 5 on "Technical Assistance for Fusion-Bonded Carpet Machine" (EES/GIT Project No. A-1608)

Dear Sir:

Jim Monti has stated that he does not need our assistance at the present time. Mr. Monti will call when assistance is needed. No work was done during this time period because none was requested. We are available when needed.

Very truly yours,

James M. Akridge
Senior Research Engineer

JMA/mac